

ABSTRACT

An ingot is manufactured by pulling it up such that V/G_a and V/G_b become 0.23 to 0.50 mm²/minute °C, respectively, where V (mm/minute) is a pulling-up speed, and G_a (°C/mm) is an axial temperature gradient at the center of the ingot and G_b (°C/mm) is an axial temperature gradient at the edge of the ingot at temperatures in a range of 1,300°C to a melting point of silicon. A wafer obtained by slicing the ingot is heat treated in a reductive atmosphere at temperatures in a range of 1,050°C to 1,220°C for 30 to 150 minutes. A silicon wafer free of OSF's, free of COP's, and substantially free of contamination such as Fe and of occurrence of slip, is obtained.